



**U.S. Department of the Interior  
Minerals Management Service  
Gulf of Mexico OCS Region**

Notice No. 108

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### OCS Operations Safety Alert

#### Explosion and Fire

While circulating out a kick with 17.7 ppg mud, dry gas surfaced. The dry gas was piped from the automatic choke through the mud/gas separator, gas flowed through the 8-inch mud line to the shale shaker box. There was no wind, and gas accumulated under the derrick floor and around the mud logging unit which was not pressurized. All personnel were removed from the mud logging unit and the shale shaker area.

Fifteen minutes later the accumulated gas exploded from an unknown ignition source, igniting wire insulation under the rig floor and in the mud logging unit. The well was shut in on bottom pipe rams and shear rams shutting off the gas flow, but the fire continued to burn. There was no water pressure to fight the fire since the generator had been shut down. The platform was then abandoned. A motor vessel's fire-fighting equipment was utilized to extinguish the remaining fire.

Damage resulting from the ignition of the gas and subsequent fire was as follows: the mud logging unit was damaged beyond repair (part of one side of the mud logging unit fell into the Gulf); the mud lines and the mud/gas separator line were also damaged; the insulation on the electrical wiring underneath the rig floor was burned off.

The following preventive action should be taken when conducting well control operations on this type of incident:

1. Whenever dry gas is being circulated out on choke through the mud/gas separator, the choke should be regulated to prevent overloading the mud/gas separator's ability to handle the amount of gas being vented and prevent gas flow through the mud/gas separator's mud line.
2. Consideration should also be given to diverting the flow from the choke directly to a gas vent line until liquids reach the choke.
3. All electrical installations in classified locations should comply with NFPA Standard No. 70, "National Electrical Code," or NFPA Standard No. 496, "Purged and Pressurized Enclosures for Electrical Equipment in Hazardous Locations."

[signed] D.W. Solanas

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Offshore Operations Support

Gulf of Mexico OCS Region